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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,502	09/25/2003	Jean-Christophe Ehrstrom	22130-00030-US	4577

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EXAMINER

LAVILLA, MICHAEL E

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,502

Applicant(s)

EHRSTROM ET AL.

Examiner

Michael La Villa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-80 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20040408.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f). Throughout the Specification various publications are described as "incorporated by reference." To the extent that the relevant subject matter to be incorporated is "essential material," this is improper and must be corrected by an appropriate amendment to the Specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
3. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-80 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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- a. Regarding Claims 1, 6, 7, 66, and 80, and any others not listed that reference percentages, it is unclear what is the percentage basis that is claimed. Is this a weight percentage basis of some other basis?
- b. Regarding Claim 3, it is unclear whether the claimed "external faces" are among the "N metal sheet layers" of Claim 1 or not. If not, should the claim read "further includes"? Must the claimed "aluminum non-heat treatable alloy sheet" of Claim 3 contain Mg as claimed in Claim 1 or not?
- c. Regarding Claims 5, it is unclear what is the antecedent basis of the phrase "said Al-Mg alloy sheet." Claim 1 allows for the sheets to be the same or different. It is unclear whether Claim 5 requires that they all be the same.
- d. Regarding Claim 7, it is unclear what is meant by the phrase "and / or." The spacing is confusing. As well, it is unclear whether this claim specifies that the alloy is to further comprise Sc and/or Hf in the claimed amounts or whether it means something else.
- e. Regarding Claims 15 and 17-19, it is unclear what is the antecedent basis of the phrase "said metal sheet." Must all N sheets meet these requirements?
- f. Regarding Claims 43-63, it is unclear what is meant by the phrase "suitable or otherwise used in." It is unclear whether the claim is to a structural element in an aeronautical construction or a structural element that is capable of being in an aeronautical construction.

- g. Regarding Claim 66, it is unclear what is the relationship between the claimed "at least two external faces," wherein at least one is an aluminum non-heat treatable alloy sheet, and the sheet and the heat-treatable or non-heat-treatable alloy. Where only two faces are present, it is unclear whether the second face must be an aluminum alloy or not? Must it be a sheet? Where more than two faces are present, it is unclear what are the required elements for the additional faces in terms of alloy compositions, their properties of heat-treatability, and sheet quality. At the end of the claim are "said two faces" the described first and second faces or any of the "at least two external faces"?
- h. Regarding Claim 72, it is unclear what is the relationship between these layers and sheets and the faces, sheets, and alloys of Claim 66. Are these "metal sheets" in addition to those of Claim 66 or somehow related?
- i. Regarding Claim 74, it is unclear whether the second face is a sheet that must meet the thickness requirement of this claim.
- j. Regarding Claim 77, line 2, it is unclear what is meant by the word "products". It is unclear whether the "mechanical properties" also refer to ultimate tensile strength and tensile yield strength or to something else. It is unclear what constitutes the claimed "Glare-type composite laminated sandwich panel incorporating 2024T3" that is to be compared to the claimed article. It is unclear how the comparison Glare-type panel is to be constructed so as to make a comparison.

- k. Regarding Claim 78, the spacing in the phrase “and / or” is confusing. It is unclear whether the phrase “without using clad sheets” means that the composite is to lack clad sheets or whether no clad sheets were to be used in making the composite.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
6. A person shall be entitled to a patent unless –
7. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
8. Claims 1, 3, 6, 7, 22, 24, 27, 28, 43, 45, 48, 49, 66, 67, 70, 71, and 77-78 are rejected under 35 U.S.C. 102(b) as being anticipated by Sobolev USP 5,219,629. Sobolev teaches panel laminates comprised of two non-heat treatable series 5000 aluminum alloy sheets that are separated by a resin, including epoxy resin, reinforced with glass fibers. See Sobolev (Abstract; col. 19, line 58 through col. 20, line 53; col. 25, line 49 through col. 29, line 7).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
- i. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 11. Determining the scope and contents of the prior art.
 12. Ascertaining the differences between the prior art and the claims at issue.
 13. Resolving the level of ordinary skill in the pertinent art.
 14. Considering objective evidence present in the application indicating obviousness or nonobviousness.
15. Claims 1-7, 22-28, 43-49, and 65-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schalkwuk WO 98/53989. Schalkwuk teaches composite laminates of aluminum alloy sheets separated by adhesive comprising glass fibers. See Schalkwuk (Abstract; page 6, line 19 through page 8, line 15; and Claims). Schalkwuk does not exemplify non-heat treatable series 5000 alloys, but teaches that such alloys are effective. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate a panel from the series 5000 alloys of Schalkwuk, as Schalkwuk suggests that panels formed with sheets of these alloys are effective, especially for corrosion resistance.
16. Claims 1-7, 22-28, 43-49, and 65-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roebroeks USP 5,547,735. Roebroeks teaches composite laminates of aluminum alloy sheets separated by adhesive comprising glass fibers. See Roebroeks (Abstract; col. 1, line 45

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through col. 2, line 52; col. 3, line 38 through col. 4, line 5; col. 4, line 55 through col. 5, line 57). Roebroeks does not exemplify non-heat treatable series 5000 alloys, but teaches that such alloys are effective. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate a panel from the series 5000 alloys of Roebroeks, as Roebroeks suggests that panels formed with sheets of these alloys are effective, especially for corrosion resistance.


Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Tuesday, Thursday, and alternating Fridays.
18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael La Villa
31 May 2005



MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER